

**RECEIVED
CENTRAL FAX CENTER**

10/522,363

FEB 05 2007**REMARKS**

Claims 14-26 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for the reasons noted in the official action. The rejected claims are accordingly amended, by the above claim amendments, and the presently pending claims are now believed to particularly point out and distinctly claim the subject matter regarded as the invention, thereby overcoming all of the raised § 112, second paragraph, rejections.

Claims 14-21 and 24-26 are rejected, under 35 U.S.C. § 102(b), as being anticipated in view of U.S. Patent No. 5,522,777 to Baxter et al. The Applicant acknowledges and respectfully traverses the raised anticipatory rejection in view of the following remarks.

The Applicant thanks the Examiner for indicating that claims 22 and 23 would be allowable if rewritten to incorporate all of the main independent claim and any intervening claims. Accordingly, as claim 14 has now been amended to include the subject matter of previous claims 22 and 23, the Applicant believes the presently pending claims to be allowable.

Turning to new claims 27-29, as discussed at least at paragraph [053] of the Applicant's specification it is important to note that in the present invention the shifting of the range transfer gearbox from a low range to a high range, and vice-versa, can occur essentially independent of the engine or motor speed because the ratio of the III-L (low range) gear is equal or substantially equal to the transmission ratio of the III-H (high range) gear. As discussed in Applicant's paragraphs [053] through [063] and as seen, for example, in FIG. 3 as set forth below, where the ratio of the gear steps III-L and III-H of the multi-range transmission are approximately equal, because of the essential equality of the transmission ratios, a range shift can quickly and easily take place in the range transfer box from "low" to "high" or vice versa. In this instance, as best seen in Applicant's FIG. 4 also provided below, at any given vehicle speed v_{FZG} in the requisite range, the rotation speed n_{MOT} of the engine is approximately the same for the III-H and the III-L in the high and low gear range respectively.

BEST AVAILABLE COPY

10/522,363

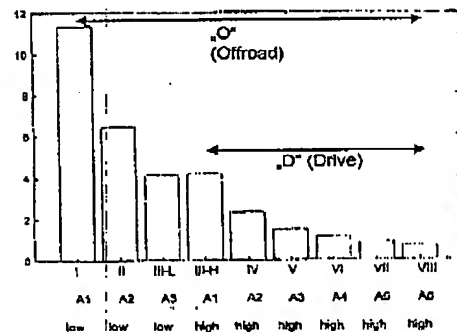


Fig. 3

In other words, the range shift is facilitated because no synchronization of vehicle speed and engine speed is necessary due to the transmission ratio for the highest (low) gear, being substantially the same as the ratio for the lowest (high) gear.

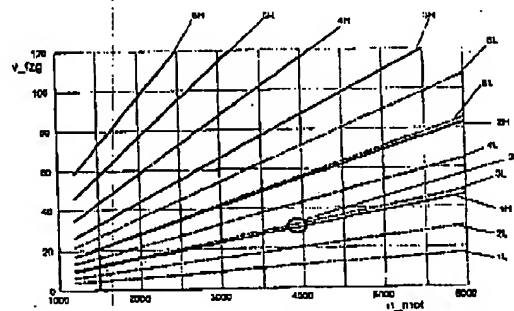


Fig. 4

Thus, in the present invention, a transfer between the high and the low gear range via the use of positive engaging interlocking gear teeth, or other shift elements for that matter, in the range transfer box can occur because these shift elements are rotating at essentially the same speeds and do not need to be synchronized. In this way, synchronization of the shifting elements in the range transfer box 9 has already been accomplished via the automatic transmission 8 and the range shift can take place independently of any specified control of engine speed or transmission control.

2/06/12:56 PM

10/522,363

The Applicant has made a thorough review of Baxter et al. '777 and, besides the fact that Baxter et al. '777 discloses as shown in FIG. 2 below, a transfer case which utilizes a conventional multi-disc clutch assemblies 64, 94 and 74, this reference provides no particular disclosure, teaching or suggestion, for example, as seen in column 7, lines 5-17, that any transmission gear ratios for the transfer case low or high ranges, are similar much less substantially equal as now claimed by the Applicant.

In fact, as described in Baxter et al. '777 and as is well known and conventional in the art, in cases where the transmission and the vehicle speed and the engine speed are not synchronized through the transfer case, a signal is sent to the transmission control to shift the transmission gear ratio so as to match the transmission output speed to the transfer case output speed (see Baxter et al., column 5, lines 47-54). This particular adjustment of the transmission gear ratios or gear ratios and the engine speed takes substantial amounts of time. This time lag during the range shift is eliminated by the Applicant's invention and the elimination of the necessity to accordingly synchronize the shifting elements. In other words, where a higher gear of the low range and a lower gear of the high range are substantially the same, the transmission does not require any ratio dependent control to accordingly synchronize with the range transfer box. In other words, the Applicant's method has already synchronized the motor and the vehicle speed so that no such transmission control is necessary. A thorough review of this reference as well as some of the other uncovered references in this application, do not reveal any such step of, "maintaining a first transmission ratio at substantially the same value as a second transmission ratio during the range change in the range transfer box (9) between a high and a low range of the range transfer box (9)", as specifically recited in new claim 27.

As the Examiner is aware, in order to support an anticipation rejection under 35 U.S.C. §102, the cited references must disclose each and every feature of the presently claimed invention. As Baxter et al. '777 does not disclose any such matching or relatively equivalent

2007-12-26 PM

- 7 -

BEST AVAILABLE COPY

10/522,363

gear transmission ratios between the high and the low range, the Applicant believes the new claims 27-29 to be allowable as well.

If any further amendment to this application is believed necessary to advance prosecution and place this case in allowable form, the Examiner is courteously solicited to contact the undersigned representative of the Applicant to discuss the same.

In view of the above amendments and remarks, it is respectfully submitted that all of the raised anticipation rejections should be withdrawn at this time. If the Examiner disagrees with the Applicant's view concerning the withdrawal of the outstanding rejections or applicability of the Baxter et al. '777 references, the Applicant respectfully requests the Examiner to indicate the specific passage or passages, or the drawing or drawings, which contain the necessary teaching, suggestion and/or disclosure required by case law. As such teaching, suggestion and/or disclosure is not present in the applied references, the raised rejection should be withdrawn at this time. Alternatively, if the Examiner is relying on his/her expertise in this field, the Applicant respectfully requests the Examiner to enter an affidavit substantiating the Examiner's position so that suitable contradictory evidence can be entered in this case by the Applicant.

In view of the foregoing, it is respectfully submitted that the raised rejection(s) should be withdrawn and this application is now placed in a condition for allowance. Action to that end, in the form of an early Notice of Allowance, is courteously solicited by the Applicant at this time.

The Applicant respectfully requests that any outstanding objection(s) or requirement(s), as to the form of this application, be held in abeyance until allowable subject matter is indicated for this case.

2007-12-01 PM

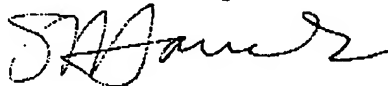
- 8 -

BEST AVAILABLE COPY

10/522,363

In the event that there are any fee deficiencies or additional fees are payable, please charge the same or credit any overpayment to our Deposit Account (Account No. 04-0213).

Respectfully submitted,



Scott A. Daniels, Reg. No. 42,462

Customer No. 020210

Davis Bujold & Daniels, P.L.L.C.

112 Pleasant Street

Concord, NH 03301-2931

Telephone 603-226-7490

Facsimile 603-226-7499

E-mail: patent@davisandbujold.com

BEST AVAILABLE COPY

2007-12-26 PM

- 9 -